Instructor: Dr. Thomas Engler, MSEC 398, engler@nmt.edu

Course Description: Introduction to logging tool principles and operation. Evaluation of reservoir properties and interpretation of open hole well logs. Multiwell correlations with application to volumetric calculations. Lab exercises on reservoir mapping and well log case studies. (Same as ERTH 370)

Course Objectives:
- Apply the fundamentals of physics and chemistry to understand tool principles and operation
- Compare core and log data and understand the differences/similarities in scale
- Determine formation properties from well log data and interpret the results
- Apply volumetric calculations to a multiwell reservoir

Prerequisites: PE 345 and lab – Reservoir Engineering I; PHYS 122 – General Physics II;

Materials:

Course Outline:

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<th>Well logging</th>
<th>Lab</th>
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<td>(1). Introduction</td>
<td>1. Wellposting and data acquisition</td>
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<td>(3). Wellbore Environment</td>
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<td>(4). Determination of Rw</td>
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<td>(5). SP and GR logs</td>
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<td>(6). Resistivity logs</td>
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<td>(7). Porosity logs</td>
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<td>(8). Interpretation (Clean fms., gas-bearing fms., Shaly fms.)</td>
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PETR 370 (3 cr. hrs.)
Reservoir Evaluation
Spring Semester, 2013

Grading:

In class assignments (will drop lowest) 10%
Homework (will drop lowest) 10%
Midterm 30%
Final Exam 30%
Lab assignments 20%

NO LATE HOMEWORK or LABS WILL BE ACCEPTED!!
Deadline for submission will be written on the header of the assignment.

Midterm and Final Exams. Will be closed book and notes. An equation sheet will be provided.

Note: NO MAKEUP TESTS! An excused absence will result in additional weight on the final exam. Unexcused absence of exam will result in a zero grade.
For an excused absence to be valid you must notify me prior to missing class. Also, if sick, a copy of your doctor’s excuse must be submitted to me immediately after you return back to school. Waiting to the end of the semester to submit your excuse will not be accepted!

Class attendance will be recorded. For students whose final grade is on a grade borderline, excellent attendance is a persuasive argument to obtain the next higher letter grade.

Academic Honesty: Students are expected to adhere to all academic policies; therefore, any cheating on examinations, plagiarism or other forms of academic dishonesty will not be tolerated and may subject the student to penalties ranging from a failing grade to dismissal.